Damage Control References

Lesson topic 1.3

Enabling Objectives

1. Discuss the use of damage control books and isometric damage control diagrams to aid in countermeasures during a casualty
2. Select the purpose and contents of damage control books and damage control isometric diagrams to aid on countermeasures during a casualty

Damage control books

- Contents
  - Part I: General Information
  - Part II: DC Systems and stability data
  - Part III: Miscellaneous Systems
  - Part IV: Electrical Systems

Damage control books

- Issued by NAVSEA. Shall NOT be transferred without NAVSEA authority
- Supplied to
  - Fleet Commander
  - Force Commanders
  - Division Commanders
  - Squadron Commanders
  - Commanding officers
  - Other Naval activities as required

Three Dimensional Isometric Damage Control Diagrams

- Furnished to ships in one of two types
  - Color-coded (Lithograph), to all combatants and certain large auxiliary ships
  - Half-tone reproductions (black and white), for ships such as AE's, AD's, LST's & other auxiliary & miscellaneous ships
  - Total of 15 DC Plates
    - May be subdivided (4A, 4B, etc…)

Reading Damage Control Diagrams

- A DC Plate is a diagram that illustrates ship compartmentation & systems
- Each compartment is designated by
  - Number & letter combination
- The various systems are designated by
  - Color, lettering, numbers & symbols

Reading Damage Control Diagrams

- The purpose of reading a DC Plate is to provide information to aid in countermeasures in the event of casualties
- Heavy black lines indicate watertight/oiltight boundaries
- Thin black lines indicate airtight, fire retardant, fumetight, and non-tight boundaries
- Dotted lines/cross hatching/dashed lines indicate hidden boundaries, piping and valves

Reading Damage Control Diagrams

- Color Coding for DC Plates
  - Pink = Hazardous spaces
  - Yellow = DC Repair Stations/DCC and radiation hazard areas
  - Blue = Decontamination Stations

Damage Control Diagrams

- Flooding Effects and Liquid Loading (Plate 1)
- The purpose of the Flooding Effect portion is to show the effect of flooded compartments on the ships stability
  - If green spaces are flooded, the stability is improved
  - If pink spaces are flooded, the stability is decreased because of the added high weight, free surface effect, or combination of both

Damage Control Diagrams

- Flooding Effects and Liquid Loading (cont..)
  - If yellow spaces are completely filled stability is improved, but stability is impaired when free surface exists
  - If the white spaces are flooded, there is no appreciable effect on the stability of the ship

Damage Control Diagrams

- Flooding Effects and Liquid Loading (cont.)
- In the Liquid Loading part of this plate, the four numbers in the compartment represent
  - Left upper, capacity in tons
  - Left lower, change in draft AFT in inches
  - Right upper, list in degrees
  - Right lower, change in draft FWD in inches

Damage Control Diagrams

- Subdivision Second Deck and below (Plate 2) and Subdivision Main Deck & above (Plate 3)
  - Information obtained from these plates
    - compartment numbers, names and frame numbers (total ship)
  - When combating casualties, these plates may be used to
    - Set up flooding, fire, smoke boundaries
    - Plot damage

Damage Control Diagrams

- Main & Secondary Drainage & Clean Ballasting Systems (Plate 4A)
  - Main, secondary and miscellaneous systems
- Plumbing, Gravity & Miscellaneous Drains, Sounding Tube Deck Plates & Sewage Disposal System (Plate 4B)
  - This plate identifies installed systems so that drainage is accomplished quickly and effectively

Damage Control Diagrams

- Tank Stripping System (Plate 5)
- Firemain Sprinkler, Foam, and Washdown System (Plate 6)
- Fuel Filling, Transfer and Overflow System (Plate 7)
- JP-5 Filling, Transfer, Service Stripping & Overflow System (Plate 8)
- Ventilation Systems, Supply and Recirculating (Plate 9)

Damage Control Diagrams

- Ventilation System, Exhaust (Plate 10)
- Chilled Water System (Plate 11)
- Compressed Air Systems (Plate 12)
- Casualty Power and Communications (Plate 13)
- Vital DC Electrical Equipment and Power Supply Chart (Plate 14 A & B)
- DC Communications Directory (DC Telephone Book, Plate 15)

Handling and Updating for DC Books and Diagrams

- DC Books and Diagrams are classified CONFIDENTIAL
- SHIPALT's and ORDALT's trigger an update
- Documents requiring updates
  - DC plates
  - Master Damage Control book
  - Master Compartment Check-off list
  - CCOL in compartment

Handling and Updating for DC Books and Diagrams

- Three basic types of updates
  - Deletion
  - Addition
  - Change
- Master copies must be kept current, responsibility of the DCA
- When a ship is decommissioned and scheduled for disposal and/or scrapping, Damage Control books shall be burned and their disposition reported to NAVSEA

Handling and Updating for DC Books and Diagrams

- Revisions to master copy/ship's force copies are as follows
  - Deletions: Cross out in RED ink, NO ERASURES
  - Use proper color coding of the system, then circle affected area with RED ink
  - Name changes can be made as marginal notes
  - Revisions to text and tables shall be made in black ink
  - No changes shall be made to DC classifications without NAVSEA approval

RPL Notebook

- Table of contents
  - NB 1-1 CONDITION I DC organization chart
  - NB 1-2 Repair party organization chart
  - NB 1-3 Alternate repair party mustering points
  - NB 2-1 Repair party and unit areas of responsibility
  - NB 2-2 Tanks and voids
  - NB 3-1 Electrical isolation list
  - NB 4-1 Fire fighting methods

RPL Notebook

- Table of contents (cont.)
  - NB 4-2 Checklist for shipboard fires
  - NB 4-3 Compartment hazards
  - NB 4-4 Magazine sprinkler control valves
  - NB 4-5 Main space fire fighting doctrine
  - NB 6-1 Casualty power bill
  - NB 6-2 Casualty power checklist
  - NB 7-1 Symptoms and first aid for nerve agent exposure

RPL Notebook

- Table of contents (cont.)
  - NB 7-2 Emergency personal decontamination
  - NB 7-3 Unmasking procedures flow chart
  - NB 7-4 CBR defense bill
  - NB 7-5 CBR defense bill for beach group units

Naval Ships Technical Manuals

- Chapter 070, Radiological Recovery of Ships after Nuclear Weapons Explosions
- Chapter 079, Vol I, Stability and Buoyancy
- Chapter 079, Vol 2, Practical Damage Control
- Chapter 555, Fire Fighting - Ship
- Chapter 470, Shipboard BM/CW Defense and Counter measures
- NWP 3-20.31, Surface Ship Survivability

Summary and Review

- Damage Control (DC) books
- Damage control Diagrams (DC plates)
- Repair Party Manual
- Naval Ships technical Manuals